

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-23 (Cancelled)

24. (New): A method for manufacturing a metal slurry in a partly molten state by cooling a molten magnesium alloy, comprising:

allowing the molten magnesium alloy to flow down along the surface of a tilted cooling body cooled by a cooling mechanism and having a tilted surface and forcibly cooling the molten magnesium alloy to thereby generate crystals on the tilted cooling body; and  
vibrating the tilted cooling body on which the molten magnesium alloy is flowing and crystallizing to thereby forcibly liberate the crystals from the surface of the tilted cooling body in an initial stage of crystallization.

25. (New): A method for manufacturing a metal slurry by cooling a molten magnesium alloy, comprising:

pouring a molten magnesium alloy from above a cooling body cooled by a cooling mechanism onto the cooling body to cool the molten magnesium alloy by contact with a surface of the cooling body and to thereby generate crystals on the surface of the cooling body; and

vibrating the cooling body bathed with the molten magnesium alloy to forcibly liberate the crystals on the surface of the cooling body in an initial stage of crystallization.

26. (New): A method for manufacturing an ingot, comprising:

bringing a molten magnesium alloy into contact with the surface of a cooling body having a forcibly cooled surface immediately before introducing the molten magnesium alloy into a mold forcibly cooled, and thereby generating crystals of the molten magnesium alloy on the surface of the cooling body; and

vibrating the cooling body with which the molten magnesium alloy is in contact, and thereby liberating the crystals from the surface of the cooling body in an initial stage of crystallization.

27. (New): The method according to claim 26 wherein the cooling body is a tilted cooling body having a tilted surface.

28. (New): The method according to claim 26 further comprising positioning the cooling body into the mold before crystal generating and crystal liberating.

29. (New): A method for manufacturing an ingot, comprising:  
supplying a molten magnesium alloy into a mold cooled by a mold cooling mechanism for forcibly cooling a mold;  
cooling the molten magnesium alloy in the mold to generate crystals by contact of the molten magnesium alloy with an inner surface of the mold;  
vibrating the mold with the mold vibrating mechanism to liberate the crystals from the inner surface of the mold in an initial stage of crystallization; and  
producing the ingot in the mold.

30. (New): A system for production of an ingot, comprising:  
a melting furnace for melting metal;

a tilted cooling body having a tilted surface that defines a passage allowing a molten magnesium alloy supplied from the melting furnace to flow and having a cooling mechanism for forcibly cooling the surface to let the molten magnesium alloy to form crystals by contact with the surface;

a cooling body vibrating mechanism for vibrating the tilted cooling body to liberate the crystals from the surface of the tilted cooling body in an initial stage of crystallization;

a mold for receiving metal slurry flowing down in a partly molten state from the surface of the tilted cooling body and making the ingot therein; and

a mold cooling mechanism for forcibly cooling the mold.

31. (New): A system for production of a metal plate from a metal slurry made by cooling a molten magnesium alloy, comprising:

a melting furnace for melting magnesium alloy to prepare a molten magnesium alloy;

a tilted cooling body having a tilted surface that defines a passage allowing the molten magnesium alloy supplied from the melting furnace to flow, the tilted cooling body further having a cooling mechanism for forcibly cooling the surface to let the molten magnesium alloy to form crystals by contact with the surface;

a cooling body vibrating mechanism for vibrating the tilted cooling body to liberate the crystals from the surface of the tilted cooling body in an initial stage of crystallization, wherein the molten magnesium alloy supplied onto the tilted cooling body exits from the cooling body in form of a metal slurry containing the crystals.

32. (New): A system for production of an ingot by introducing a molten magnesium alloy into a mold, comprising:

a melting furnace for melting metals;

a mold cooling mechanism for cooling the mold; and

a mold vibrating mechanism for vibrating the mold,

wherein the molten magnesium alloy is introduced into the mold while the mold is cooled by the mold cooling mechanism and vibrated by the mold vibrating mechanism, and crystals formed on an inner surface of the mold by contact of the molten magnesium alloy with the inner surface are liberated in an initial stage of crystallization.

33. (New): A system for production of an ingot by introducing a molten magnesium alloy into a mold, comprising:

a melting furnace for melting metals;

a cooling body located at an inlet of the mold to cool the molten magnesium alloy introduced into the mold and form crystals on a surface thereof by contact of the molten magnesium alloy with the said surface; and

a cooling body vibrating mechanism for vibrating the cooling body to liberate the crystals from the surface of the cooling body in an initial stage of crystallization.

34. (New): The system according to claim 33 further comprising a driving mechanism for moving the cooling body to withdraw from the inlet of the mold.